THE CLAIMS

We claim:

1. A golf ball comprising:

a core having a compression of no greater than about 90; and

a cover having at least one layer being formed from a blend including a polyether-type thermoplastic polyurethane having a percent rebound resilience of greater than 60 such that the golf ball has a coefficient of restitution of greater than about 0.76.

2. The golf ball of claim 1, wherein the blend further comprises a second component, wherein said second component is a thermoplastic material.

3. The golf ball of claim 2, wherein the second component is selected from the group consisting of polyesterester block copolymers, polyetherester block copolymers, polyetheramide block copolymers, dynamically vulcanized thermoplastic elastomers, styrene-butadiene elastomers, other thermoplastic polyurethanes, thermoplastic polyesters, polymers formed using a metallocene catalyst, and blends thereof.

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4. The golf ball of claim 3, wherein the second component comprises a polyetherester block copolymer.

5. The golf ball of claim 3, wherein the blend further comprises a density adjusting filler in an amount sufficient to provide the at least one layer with a specific gravity of greater than about 1.2.

6. The golf ball of claim 5, wherein the at least one layer has a specific gravity of greater than about 1.25.

7. The golf ball of claim 6, wherein the density adjusting filler comprises zinc oxide.

8. The golf ball of claim 1, wherein the blend comprises about 20 to 90 percent by weight of the polyether-type polyurethane and about 5 to 50 weight percent of a second thermoplastic component.

9. The golf ball of claim 8, wherein the blend comprises about 30 to 60 percent by weight of the polyether-type polyurethane and about 20 to 40 weight percent of a second thermoplastic component.

10. The golf ball of claim 8, wherein the blend further comprises about 5 to 40 percent by weight of a filler material.

11. The golf ball of claim 1, wherein the intermediate layer has a Shore D hardness of about 25 to 50 and a flexural modulus of about 1,000 psi to 8,000 psi.

12. The golf ball of claim 1, wherein the golf ball has a compression of no greater than about 90.

13. The golf ball of claim 1, wherein the cover comprises a second layer of at least one of a thermoplastic or a thermoset material.

14. A golf ball comprising:

a core comprising polybutadiene;

a cover layer having a Shore D hardness of about 54 to 72; and

at least one intermediate layer disposed between the cover and the core, wherein the at least one intermediate layer is formed from a blend comprising polyether-type polyurethane and a second thermoplastic component; and

wherein the golf ball has a coefficient of restitution of greater than about 0.78.

15. The golf ball of claim 14, wherein the intermediate layer is formed from a blend comprising:

about 30 to 60 percent by weight of the polyether-type polyurethane;

about 15 to 30 weight percent filler material; and

about 20 to 40 weight percent of a block copolymer.

16. The golf ball of claim 14, wherein the intermediate layer has a Shore D hardness of less than about 40 and a flexural modulus of less than about 10,000 psi.

17. The golf ball of claim 14, wherein the blend comprises less than about 40 weight percent polyetherester block copolymer.

18. A golf ball having a coefficient of restitution of greater than about 0.7 and a compression of at least about 50, wherein the ball comprises a core and a cover comprised of at least one layer disposed concentrically about the core, wherein the layer is a composition comprising a polyether urethane derived from a diisocyanate reacted with a hydroxyl terminated polyether and a glycol chain extender composition blended with a thermoplastic material.

19. The golf ball of claim 18, wherein the hydroxyl terminated polyether has alkylene oxide repeat units containing from 2 to 6 carbon atoms and a weight average molecular weight of at least 1,400.

20. The golf ball of claim 18, wherein the hydroxyl terminated polyether contains an alkylene oxide repeat group selected from the group of tetramethylene and butylene oxide.